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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/645,798  | 08/22/2003  | Takashi Kawaguchi    | 116914              | 8136             |
| 25944   | 7590        | 03/28/2006           |                     |                  |
| OLIFF & BERRIDGE, PLC<br>P.O. BOX 19928<br>ALEXANDRIA, VA 22320 |             |                      | EXAMINER            | SHOSHO, CALLIE E |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 1714                |                  |

DATE MAILED: 03/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/645,798             | KAWAGUCHI, TAKASHI  |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Callie E. Shosho       | 1714                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 09 January 2006.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-9 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All
  - b) Some \*
  - c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

**DETAILED ACTION**

1. All outstanding rejections are overcome by applicant's amendment filed 1/9/06.

The new grounds of rejection as set forth below are necessitated by applicant's amendment and thus, the following action is final.

**Claim Rejections - 35 USC § 112**

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 1 has been amended to recite that the black ink comprises "a first dispersing agent that is different from the first resin particles" and that the color ink comprises "a second dispersing agent that is different from the second resin particles". It is the examiner's position that this phrase fails to satisfy the written description requirement under the cited statute since there does not appear to be a written description requirement of the above phrases in the application as originally filed, *In re Wright*, 866 F.2d 422, 9 USPQ2d 1649 (Fed. Cir. 1989) and MPEP 2163.

As support for the above amendment, applicant points to paragraph 29 and Table 1 of the present specification. While paragraph 29 provides support to recite that the black ink and color ink each contain dispersant, this portion of the specification does not provide support to recite that the black ink and color ink comprise different dispersants, i.e. first dispersant and second dispersant. Further, neither paragraph 29 or Table 1 provides support to recite that the first dispersant or second dispersant is "different from" the first resin particles and the second resin particles, respectively. That is, while Table 1 provides specific example of dispersant, i.e. modified polyacrylic acid, that is different form the specific resin particles, i.e. polyester, for the black ink and Table 2 provides specific example of dispersant, i.e. modified polyacrylic acid, that is different from the specific resin particle, i.e. acrylic resin, this does not provide support for the broad recitation in the present claims that the dispersing agent is "different from" the resin particles.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(a) Claim 1 has been amended to recite that the black ink comprises first water-soluble organic solvent and first dispersing agent and that the color ink comprises second water-soluble organic solvent and second dispersing agent. The scope of the claim is confusing because it is

not clear what "first" and "second" are meant to refer to. Does this mean that the water-soluble organic solvent and dispersing agent in the black ink is different than the water-soluble organic solvent and dispersing agent in the color ink or can the water-soluble organic solvent and dispersing agent in the black ink and the color be the same as long as each ink comprises both water-soluble organic solvent and dispersing agent. Clarification is requested.

(b) Claim 1 has been amended to recite that "a first" pH of the black ink is not less than 7.8 and a "second" pH of the color ink is not more than 4.5. The scope of the claim is confusing because it is not clear what is meant by "first" pH and "second" pH. Clarification is requested.

Similar questions arise in claims 2 and 3 which recite similar claim language.

**Claim Rejections - 35 USC § 103**

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 1-3 and 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ma et al. (U.S. 6,540,329) in view of Yatake (U.S. 6,670,409).

Ma et al. disclose color ink set comprising (i) black ink comprising water, solvent, black pigment, resin having carboxyl group, and pH adjusting agent, i.e. organic amine and (ii) colored ink comprising water, solvent, coloring pigment, resin obtained from sulfopropyl acrylate, and pH adjusting agent, i.e. organic acid. It is disclosed that the black ink possesses pH of about 8 while the colored ink includes magenta ink possessing pH of about 3 and yellow ink comprising pH of 2.5-4. There is further disclosed ink cartridge containing the ink set (col.1, lines 13-15,

col.4, lines 20-35 and 40-57, col.5, lines 10-21, col.6, lines 1-8 and 25-28, col.7, lines 36-40, col.8, lines 21-23, 39-44, and 48, col.9, lines 41-col.10, line 15, and col.12, lines 11-34). It is noted that the disclosure that the pH of the black ink is "about" 8 clearly encompasses presently claimed pH in claim 2 of 8.7.

The difference between Ma et al. and the present claimed invention is the requirement in the present claims of dispersant.

Yatake, which is drawn to ink jet ink set, disclose using inks that comprise dispersant such as styrene-acrylic resin (which is different than the polymer in the black ink and color ink disclosed by Ma et al.) in order to enhance dispersion stability of the pigment in the ink (col.6, lines 64-67 and col.7, lines 40-48).

In light of the motivation for using dispersant disclosed by Yatake as described above, it therefore would have been obvious to one of ordinary skill in the art to use dispersant in the color ink and the black ink of Ma et al. in order to enhance dispersion stability of the pigment in the ink, and thereby arrive at the claimed invention.

8. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ma et al. in view of Yatake as applied to claims 1-3 and 5-9 above, and further in view of Carlson et al. (U.S. 6,136,890).

The difference between Ma et al. in view of Yatake and the present claimed invention is the requirement in the claims of specific resin.

Carlson et al., which is drawn to ink jet inks, disclose the use of polyurethane comprising carboxyl groups in order to minimize aggregation and flocculation of pigment (col.2, lines 34-39, col.6, lines 9-42, and col.7, lines 25-37).

In light of the motivation for using polyurethane comprising carboxyl groups disclosed by Carlson et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use such polyurethane in the ink jet ink of Ma et al. in order to prevent aggregation and flocculation of the pigment, and thereby arrive at the claimed invention.

#### Response to Arguments

9. Applicant's arguments filed 1/9/06 have been fully considered but they are not persuasive.

Specifically, applicant argues that Ma et al. do not anticipate the present claims given that there is no disclosure in Ma et al. that each of the black ink and color ink comprise resin particles and dispersing agent that is different from the resin particles.

It is agreed that Ma et al. do not anticipate the present claims which is why Ma et al. is now used in combination with Yatake which is drawn to ink jet ink set and discloses using inks that comprise dispersant such as styrene-acrylic resin, which is different than the polymer in the black ink and color ink disclosed by Ma et al., in order to enhance dispersion stability of the pigment in the ink.

Applicants also argue that the polymers of Ma et al. are dispersants.

However, it is noted Ma et al. disclose that the resin can be present in the form of a dispersant or added to the ink independently of the colorant (col.7, lines 36-38).

Applicant also argues that there is no disclosure in Ma et al. that that the resin serves to preserve print fastness when the ink is printed on cloth as do the resins of the present invention.

However, there is no requirement in the present claims that the resin serves to preserve print fastness when the ink is printed on cloth. The present claims only require black ink comprising resin with carboxyl group (present claim 1) that is polyester, polyurethane, and polyolefin (claim 4) and color ink comprising resin (claim 1) or resin obtained from acrylic acid or acrylic acid ester (claim 7) which is met by Ma et al. or Ma et al. in combination with Carlson et al. (claim 4).

Applicants argue that there is no disclosure in Carlson et al. of ink set. However, note that Carlson et al. is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely, the use of polyurethane comprising carboxyl groups in ink jet inks, and in combination with the primary reference, discloses the presently claimed invention.

**Conclusion**

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 571-272-1123. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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CS  
3/17/06